State University). In 1946 he was appointed Corresponding Member, AS USSR, and took active part in the work of the Academy. He is deputy chairman of the spectroscopy Committee, chief editor of the periodical "Optika i spektroskopiya" and member of the International Committee for spectroscopy at the UNESCO. He first concentrated his scientific interest on atomic energy, the systematics of atomic spectra, the Zeeman effect in the sodium and potassium spectrum, as well as upon experimental spectroanalytical investigations. In 1930 he started a cycle of works, which was devoted to optical methods of investigating the properties of the atomic nucleus. (An investigation of the interaction between nucleus and electron shell led to the discovery of the hyperfine structure of spectra). He investigated the hyperfine structure of Na and set up a rule concerning the interrelation between nucleus-spin- and parity. He further investigated the fine structure of isotope mixtures, the excitation mechanism of the higher atomic levels, and questions of the interaction of elementary

particles. Finally, mention is made of his pedagogical activities, especially his courses in physics (which are partly held together with A. V. Timoreva). There are 1 figure and 42 Soviet references.

BOGDANOVA, [redacted]; GEYTSI, I.I.

Use of modulated electron beams in studying the optical functions of atomic excitation. Opt. i spektr. 14 no.4:588-589 Ap '63. (MIRA 16:6)

(Electron beams)
(Mercury—Spectra)

82829

S/048/60/024/008/006/017
B012/B067

24.6200

AUTHOR: Bogdanova, I. P.

TITLE: Experimental Investigation of the Functions of the Excitation of Spectral Lines of the Atoms

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 8, pp. 956-959

TEXT: First, it is pointed out that for the experimental investigation of the optical excitation functions, in most cases, the method of the double field by W. Hanle (Ref. 1) is used at present. This method can practically not be used for studying excitation functions in spectral lines with excitation potentials of 1.5 - 3 volts since sufficiently intensive electron beams with such velocities cannot be obtained because of the existing space charges. To obtain sufficiently intensive electron beams with low velocities a retarding field may be used. Here, an electron beam (Fig. 1) which has passed the apertures A and A_1 is studied. It reaches the space between the electrodes A_1 and A_2.

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82829

Experimental Investigation of the Functions of the Excitation of Spectral Lines of the Atoms

S/048/60/024/008/006/017
B012/B067

In this space the collisions of the electrons with the atoms are observed. A similar problem was studied by S. D. Gvozdover and V. S. Lukoshkov (Ref. 2). The calculations given here are applied to this case. For this purpose the connection between the coordinates of the beam cross section and the potential in this cross section are determined; Formula (4). It is shown that from this formula electron velocities can be determined at various points of the beam. From formula (2) the electron concentration may be determined at any cross section of the beam. It is pointed out that the system studied here is of the klystron type and therefore, oscillations in the decimeter or centimeter range may occur which has to be considered when selecting the mode of operation. Besides, it is also pointed out that the measurements of the excitation functions are made at a pressure of $\sim 10^{-4} \div 10^{-3}$ torr of the gas or the vapor. The gas renders the formation of oscillations difficult, and, it makes it more uncertain to find function V(x).
V - potential. - For examining the usability of the calculations given here and for explaining the disturbing causes, measurements were made

Card 2/3

Experimental Investigation of the Functions of the Excitation of Spectral Lines of the Atoms

with known excitation functions. The results are presented in Fig. 2. They are in good agreement with those obtained in earlier measurements by S. E. Frish and I. P. Zapesochnyy (Ref. 4). Fig. 2 shows that under the experimental conditions the influence exerted by oscillations, even if they are formed, is not great, whereas the positive ions do not compensate the negative charge of the beam. Besides the dependence of the excitation functions on the components of the second doublet of the cesium main series were measured in the retarding field. The results of measurements are given in diagram form in Fig. 3. It shows that near the excitation threshold the weaker doublet component shows a steeper rise of the excitation function compared with the stronger component. This leads to a change in the behavior of the intensities in the doublet components according to the electron velocity. - S. E. Frish showed interest in the present paper. There are 3 figures and 4 references: 3 Soviet and 1 German.

Card 3/3

BOGDANOVA, I.P.; GEYTSI, I.I.

Measurability of optical excitation functions by means of modulated electron beams. Izv. AN SSSR. Ser. fiz. 27 no.8:1056-1059 Ag '63. (MIRA 16:10)

BR

ACCESSION NR: AP4035808 S/0020/64/156/001/0054/0056

AUTHORS: Bogdanova, I.P.; Bochkova, O.P.; Frish, S.E. (Corresponding member)

TITLE: The role of molecular ion formation on atomic line excitation spectra

SOURCE: AN SSSR. Doklady*, v. 156, no. 1, 1964, 54-56

TOPIC TAGS: atomic excitation spectra, molecular ion, molecular ion formation, helium sup+ sub 2, helium spectrum, excited helium, continuously activating field, pulsating field, free electron, plasma state

ABSTRACT: The additional maximum observed by I.P. Bogdanova and I. Geytsi (Optika i spektroskopiya, 17, No. 1 (1964)) near the threshold in the optical functions of certain lines of excited helium when hydrogen, krypton or mercury vapor (but not when neon) was added to the helium, was investigated further. The optical function for He (λ 4713Å) was measured in a continuously activating field, and under a pulsating field (10-7 sec. activation separated by intervals of 2 x 10-5 sec.). The maximum appeared under continuous excitation, but

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ACCESSION NR: AP4035808

not for pulsed excitation. This maximum is explained by the reaction (where * indicates active state):

$$He + e \rightarrow He^* + e \quad (a)$$
$$He^* + He \rightarrow He_2^+ + e \quad (b)$$
$$He_2^+ + e \rightarrow He^{*2} + He \quad (c)$$

The role of the added gas is to supply "slow" electrons for the step (c). The authors state that the disassociative recombination of step (c) leads to selective activation of the molecules (especially in the S and D levels). This process would explain the energy level of the additional maximum and the time dependency of activation. Reference was made to the work of O.P. Bochkova, L.P. Razumovskaya (Optika i spektroskopiya, 17, No. 1(1964)) where formation of molecular ions was postulated to explain a jump increase in free electrons in the plasma state. At the same time the intensities of the low energy level lines in the spectrum increased by a greater amount than the high energy levels, and this variation in population of the levels was greater than that which would correspond to the conditions of

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ACCESSION NR: AP4035808

temperature and electron concentration. This is explained by molecular ion formation according to (b). The effective cross section of steps (b) and (c) were calculated: about 2 x 10^{-5} cm^2 and about 10^{-13} cm^2 respectively. Orig. art. has: 8 equations and 1 figure

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 28Jan64 ENCL: 00

SUB CODE: N.P NR REF SOV: 006 OTHER: 002

Gard 3/3

ACCESSION NR: AP4042998 S/0051/64/017/001/0151/0153

AUTHORS: Bogdanova, I. P.; Geytsi, I. I.

TITLE: Effect of gas and vapor impurities on the form of the excitation functions of helium spectral lines

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 151-153

TOPIC TAGS: helium, spectrum line, excitation spectrum, impurity content, hydrogen, neon, krypton

ABSTRACT: The purpose of this research was a more thorough study of the reason for the occurrence of several maxima on the excitation-function curves of the helium spectral lines. The measurements were made by the modulated electron beam method, described by the authors elsewhere (Opt. i spektr. v. 14, 588, 1963). The excitation functions were plotted at a pressure on the order of 10^{-2} mm Hg and an electron-beam current density 7×10^{-4} A/cm^2; under these conditions

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ACCESSION NR: AP4042998

there are no secondary processes. The excitation functions were measured for the following helium lines: 5875, 5048, 5016, 4922, 4713, 4439, 4471, 4121, 3965, and 3889 Å. The impurities used were hydrogen, neon, and krypton. Some impurities produced in certain lines supplementary maxima similar to those observed in a mercury-helium mixture. The magnitude of the supplementary maximum usually decreased with decrease in total pressure. Curves showing the variation of the alternating component of the electron current, plotted simultaneously with the excitation curves, disclosed no correlation with the supplementary maxima. There is no explanation as yet for the occurrence of the supplementary maxima upon addition of the impurities. "The authors thank S. E. Frish for attentive guidance of the work." Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 18Nov63

ENCL: 00

SUB CODE: OP

NR REF SOV: 002

OTHER: 001

Card 2/2

VARTAPETYAN, B.B.; BOGDANOVA, I.P.

Transformation of tannin in a tea plant under the influence of Penicillium expansum. Mikrobiologiia 33 no.5:767-771 S-O '64. (MIRA 18:3)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR.

L 24294-66 EWT(l)/EWT(m)/EWP(t) IJP(c) JD/WW/GG

ACC NR: AP6006994 SOURCE CODE: UR/0051/66/020/002/0209/0213

AUTHORS: Bogdanova, I. P.; Marusin, V. D.

62
59
B

ORG: none

TITLE: Study of the secondary processes occurring in electronic excitation by the coincidence-count method

SOURCE: Optika i spektroskopiya, v. 20, no. 2, 1966, 209-213

TOPIC TAGS: excited electron state, helium, spectral line, light excitation, electron recombination

ABSTRACT: This is a continuation of earlier work (Opt. i spektr. v. 17, 151, 1964) devoted to light excitation and deals with the secondary maximum near the excitation threshold of several helium lines observed in the dependence of the excitation functions of the spectral lines on the addition of impurities (mercury, krypton, and zenon) and resulting from secondary nonlinear processes occurring during excitation. The secondary processes were separated and identified by means of apparatus (Fig. 1) based on a previously proposed

Card 1/3 UDC: 539.186.2

L 24294-66

ACC NR: AP6006994

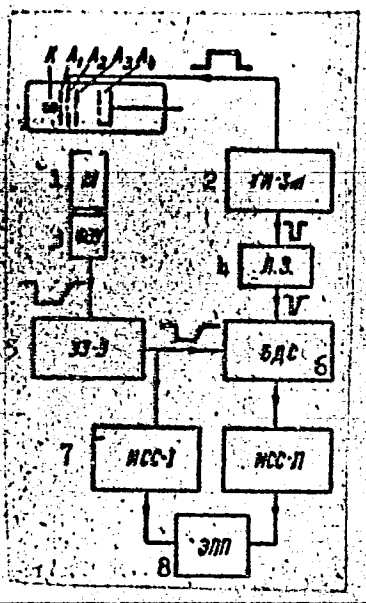

Fig. 1. Diagram of installation. 1 -- Monochromator, 2 -- pulse generator, 3 -- photomultiplier, 4 -- delay line, 5 -- amplifier, 6 -- coincidence circuit, 7 -- counting rate meter, 8 -- automatic recorder.

idea (DAN SSSR v. 156, 54, 1964) of separating in time the direct excitation due to electron impact from the population due to the secondary processes, and counting the coincidences between the two separate channels. No secondary processes were observed in pure helium, but in a mixture of He + 10% Kr, at a total mixture pressure 4×10^{-2} mm Hg, emission of the spectral lines of helium occurred at electron velocities lower than the threshold in pure

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L 24294-66

ACC NR: AP6006994

2

helium by not less than 2 ev. The time delay of the secondary process causing the emission of the 4713 Å helium line below the excitation threshold was investigated in detail. The results fit the hypothesis advanced in the earlier paper that the emission occurring below the excitation threshold is due to recombination of molecular ions of helium with slow electrons. The role of the impurity, however, still remains unclear. The authors thank S. E. Frish for interest in the work and discussion of the results, and G. K. Kartsev for help in the assembly and adjustment of the apparatus.
Orig. art. has: 6 figures

SUB CODE: 20/ SUBM DATE: 15Jul64/ ORIG REF: 002/ OTH REF: 002

Card FV 3/3

ACC NR: AP7004137 SOURCE CODE: UR/0051/67/022/001/0014/0018

AUTHOR: Bogdanova, I. P.; Yakhontova, V. Ye.

ORG: none

TITLE: Time-dependent characteristics of population processes of excited levels of mercury

SOURCE: Optika i spektroskopiya, v. 22, no. 1, 1967, 14-18

TOPIC TAGS: spectral line, excited level, ~~excitation~~, excitation function, mercury, ~~level~~, electron bombardment, ~~energy level~~, ~~population, level population~~, excitation energy, excitation spectrum

ABSTRACT: An analysis is made of measurements of the excitation function of the 5461 Å spectral line of mercury. The dependence of the population of level 7^3S_1 on time was calculated. It was assumed that the level 7^3S_1 becomes populated when mercury atoms are excited by electron bombardment and cascade transition. Comparison of the results of calculation with experimental curves shows that such an excitation mechanism can explain the observed shape of the excitation function of the mercury line 5461 Å. The authors' thank S. E. Frish for his help. Orig. art. has: 5 figures and 5 formulas. [Authors' abstract] [NT]

SUB CODE: 20/SUBM DATE: 03May66/ORIG REF: 003/OTH REF: 001/

Card 1/1 UDC: 539.184:546.49

VARTAPETYAN, B.B.; BOGDANOVA, I.P.

Transformation of catechins as related to the method of their oxidation. Biokhimiia 28 no.6: 970-977 N-D'63 (MIRA 17:1)

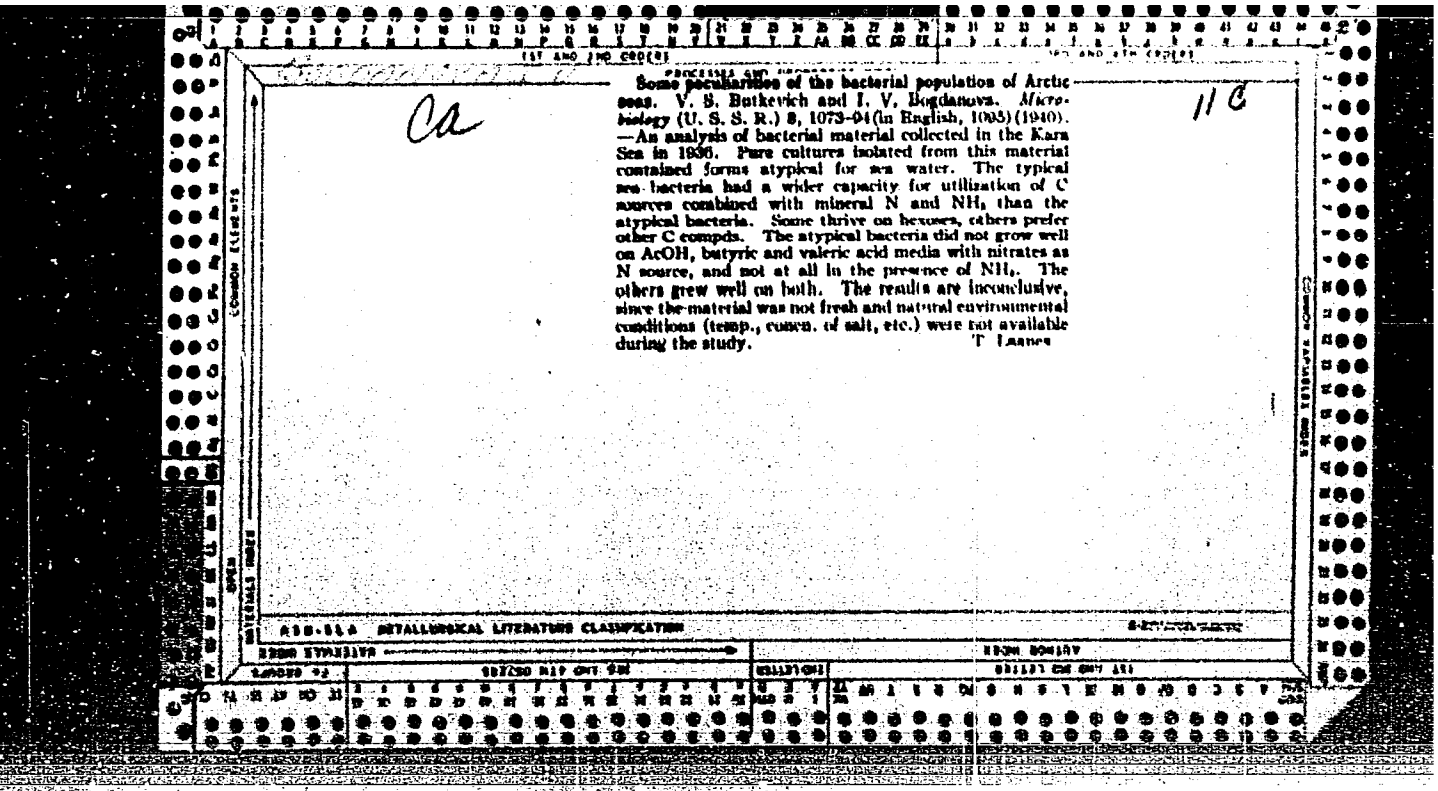
1. Institute of Plant Physiology, Academy of Sciences of the U.S.S.R., Moscow.

GORIN, Yu.A.; BOGDANOVA, I.P.

Study of vapor phase catalytic hydration of acetylene and its derivatives. Part 1: Hydration vinylacetylene to methylvinyl ketone. Zhur. ob. khim. 28 no.3:657-661 Mr '58. (MIRA 11:5)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Butenyne) (Ketones)



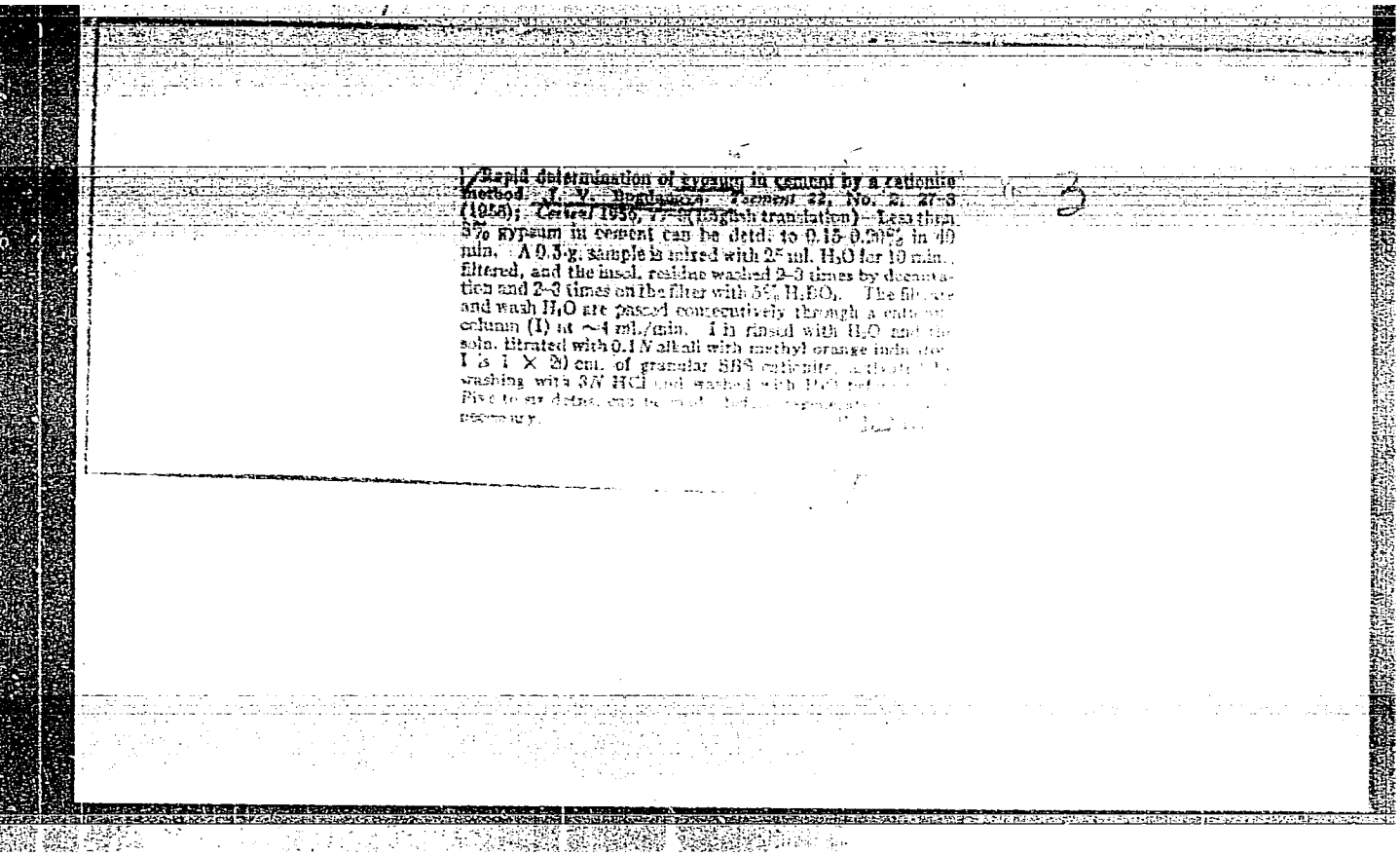
Ca

11C

Some peculiarities of the bacterial population of Arctic seas. V. S. Butkevich and I. V. Bogdanova. *Microbiology* (U. S. S. R.) 8, 1073-94 (in English, 1005) (1940). —An analysis of bacterial material collected in the Kara Sea in 1936. Pure cultures isolated from this material contained forms atypical for sea water. The typical sea bacteria had a wider capacity for utilization of C sources combined with mineral N and NH_4 than the atypical bacteria. Some thrive on hexoses, others prefer other C compds. The atypical bacteria did not grow well on AcOH, butyric and valeric acid media with nitrates as N source, and not at all in the presence of NH_4. The others grew well on both. The results are inconclusive, since the material was not fresh and natural environmental conditions (temp., concn. of salt, etc.) were not available during the study. T. Isaacs

Bogdanova, L. V.

Photoelectric colorimetric determination of aluminum oxide in materials of the cement industry. L. V. Bogdanova. *Zavodskaya Lab.* 21, 1043(1955).—The effect of Fe on the detn. of Al_2O_3 is removed by reduction with ascorbic acid (*cf.* Kul'berg, *et al.*, *C.A.* 47, 5887*g*). To the soln. add 1 ml. of *N* HCl to prevent hydrolysis, 1 ml. of 0.5% ascorbic acid (with or without glucose), 6 ml. of 0.1% aluminon, and dil. with a buffer (27.2 g. AcONa in 100–150 ml. H_2O and 10.3 ml. of concd. HCl/l.). Stir for 20 min. and analyze in a 10-mm. cuvet(s) with a photoelec. colorimeter through a green filter. Est. against a calibrated curve similarly obtained with a soln. contg. 10 γ Al_2O_3 in 1 ml. and 0.1*N* HCl. I. Beneovitz



Rapid determination of gypsum in cement by a cationic method. I. V. Bogdanov. *Cement* 22, No. 2, 27–8 (1956); *Referat. Zhur. Khim.* 1956, 77—(English translation)—Less than 5% gypsum in cement can be detd. to 0.15–0.20% in 40 min. A 0.5-g. sample is stirred with 25 ml. H_2O for 10 min., filtered, and the insol. residue washed 2–3 times by decantation and 2–3 times on the filter with 5% H_3BO_3. The filtrate and wash H_2O are passed consecutively through a cation exchange column (I) at ~4 ml./min. I is rinsed with H_2O and the soln. titrated with 0.1 *N* alkali with methyl orange indicator. I is 1 × 20 cm. of granular SBS cationite, activated by washing with 3*N* HCl and washed with H_2O [illegible] Five to six determinations can be made [illegible] necessary.

Chemical Control of Cement Production by Photoelectrocolorimetric and complex Volumetric Methods

the fastest method for detecting calcium is the complex volumetric titration of calcium salt solutions with trilon B by adding chromatic indicators. The above methods are especially suited for analyzing the raw mixtures and clinkers of the cement industry.
There are 3 tables, 1 graph and 1 Soviet reference.

ASSOCIATION: Analiticheskaya laboratoriya Giprotsementa (Analytical Laboratory of Giprotsement)

1. Cement--Production 2. Silicates--Chemical analysis
3. Titration--Applications

PROKOF'YEV, V.K.; MOROSHKINA, T.M.; BOGDANOVA, I.V.

Spectrochemical analysis of rare elements in complex solutions by means of ion exchange adsorption. Fiz.sbor. no.4:112-114 '58. (MIRA 12:5)

1. Khimicheskiy fakul'tet Leningradskogo ordena Lenina gosudarstvennogo universiteta imeni A.A.Zhdanova.
(Metals, Rare and minor--Spectra) (Ion exchange)

15(6) SOV/101-59-2-4/13

AUTHORS: Bogdanova, I.V., Malamud, M.M. and Neshchadimova, N.M.

TITLE: A Method of Chemical Control of Cement Slime Composition, Based on Compound Volumetric Analysis

PERIODICAL: Tsement, 1959, Nr 2, pp 12-17 (USSR)

ABSTRACT: The authors state that many cement plants have to adjust and modify the composition of the cement slime. Bearing in mind the essential properties of the slime, such as its saturation and one of its functional moduli, the usual analytical methods may be replaced by more up-to-date ones. The proposed scheme intends to accelerate the analysis of the slime and clinker by means of a quick reckoning of basic components, such as SiO_2, Al_2O_3, Fe_2O_3 and CaO. The result may be obtained in 2 hours with an accuracy very near to that obtainable with a classical analytical method of a silicate analysis: by a combined titration of the aluminum, iron and calcium in the filtrate of the silicon

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A Method of Chemical Control of Cement Slime Composition, Based on Compound Volumetric Analysis

dioxide. Then the filtrate is divided for a further analysis. Thus, for a volumetric determination of iron and aluminum, a 100 milliliter dose, equal to 0.4 grams, and 25 ml of calcium, equal to 0.1 g, should be taken from the entire volume. Giprotsement (State Planning Institute for Cement Industry Enterprises) has based its research upon the work of Soviet and foreign researchers. The "Sukholozhskiy tsementnyy zavod (Sukholozhskiy Cement Plant), anxious to accelerate and simultaneously to obtain the correct results of the slime analysis, has consulted the analytical laboratory of the State Planning Institute for Cement Industry Enterprises and the department of general chemistry of the Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute). The authors describe, in detail, various ways of analytical performances and results obtained with the accelerated methods, and, for comparative reasons, figures resulting from the

A Method of Chemical Control of Cement Slime Composition, Based on Compound Volumentric Analysis

classical analytic methods of SiO_2, Al_2O_3, Fe_2O_3 and CaO for the raw material mixtures and clinkers at Volkhovskiy, Leningradskiy and Pikalevskiy zavody (Volkhov, Leningrad and Pikalevo Plants), table 1. Table 2 shows comparative results obtained at the Sukholozhskiy Cement Plant for Al_2O_3 and Fe_2O_3. The authors conclude that the methods of the accelerated analysis of the raw material mixture guarantee satisfactory results of the volumetric definitions of the slime components. There are 2 tables and 8 references, 5 of which are Soviet, 1 English, 1 German and 1 Hungarian.

15(6) SOV/101-59-3-7/10

AUTHOR: Bogdanova, I.V.

TITLE: Identification of the Content of Fluorine in the Raw Material Mixtures and in the Clinker

PERIODICAL: Tsement, 1959, Nr 3, pp 27-28 (USSR)

ABSTRACT: Fluroine salts are usually added to slurry to intensify the formation process of the clinker. After calcination, the fluorine content left in the clinker must be known. The existing fluorine determination methods are either too complex for plant application (Tananayev method) or too involved. In view of the fact that fluorosilicates are soluble in water and ammonium salts, it was decided to use ammonium chloride for the extraction, and the optimum concentration thereof, and the best processing conditions were found in experiments. The article gives the technological details of the method chosen for transferring fluorine into solution, as well as of the determination by simplified Villard-Winter (volumetric) analysis, which took 30 minutes,

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and produced satisfactorily accurate results (with an error of maximum 0.01%), and by the colorimetric method which took 25 to 30 minutes and produced results with an error of not more than ± 0.005%. There are 2 tables.

5 (2)
AUTHOR: Bogdanova, I. V. SOV/75-14-3-25/29

TITLE: Determination of the Gypsum Content in Cements by Means of Cation Exchangers (Opredeleniye soderzhaniya gipsa v tsemente pri pomoshchi kationitov)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, pp 373-374 (USSR)

ABSTRACT: On treating cement with 5 % boric acid 20 % - 30 % of the substance are dissolved as calcium-, magnesium- and alkali sulfates, -borates, and -silicates. The cement clinker is [illegible] little affected. The cation exchanger saturated with hydrogen ions by hydrochloric acid yields on eluting the equivalent amount of sulfuric acid, boric acid and silicic acid. The eluate is titrated with 0.1 normal sodium hydroxide and methyl orange as indicator, where boric acid and silicic acid do not disturb. The cation exchanger is regenerated after several analyses by hydrochloric acid. The absolute maximum error is 0.15 %. A table compares the analysis results obtained by the method described with those of the gravimetric analysis. There are 1 table and 6 references, 4 of which are Soviet.

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Determination of the Gypsum Content in Cements by Means of Cation Exchangers

SOV/75-14-3-25/29

ASSOCIATION: Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut tsementnoy promyshlennosti, Leningrad (State All-Union Scientific Research and Designing Institute of Cement Industry, Leningrad)

SUBMITTED: April 17, 1958

Card 2/2

BOGDANOVA, I.V.

Photometric methods for determining the calcium content of cement raw mixes and clinkers by using complexons. TSement 26 no. 6:27-29 N-D '60. (MIRA 13:9)
(Calcium--Analysis) (Photometry)

BOGDANOVA, I.V., kand.med.nauk, assistent

Curative action of novocaine in arteriosclerosis. Trudy Khar. med. inst. no.52:101-108 '59. (MIRA 14:11)
(ARTERIOSCLEROSIS) (NOVOCAINE)

BOGDANOVA, I.V.

Photometric determination of calcium content of cement materials using complexons. Zhur.anal.khim. 16 no.6:679-682 N-D '61. (MIRA 14:12)

1. State All-Union Scientific Research Institut of Cement Industry, Leningrad.
(Calcium--Analysis)
(Cement

BOGDANOVA, I.V.

Photometric determination of magnesium in raw materials and clinkers. TSement 29 no.4:11-13 Jl-Ag '63.
(MIRA 16:11)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam tsementnoy promyshlennosti, Leningrad.

BOGDANOVA, I. V.; PERESYPKINA, T. G.

Control of the quantity of cement additions. Trudy Giprotsement no. 26:45-53 '63. (MIRA 17:5)

BOGDANOVA, I.V., kand. khim. nauk

Photometric titration of CaO, MgO, and Fe_2O_2 by complexometric methods in cement materials. TSement 30 no.4:10-11 Jl-Ag '64. (MIRA 17:11)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut tsementnoy promyshlennosti.

REYER, M.; AGRIKOVA, K., ekonomist; POLYAKOV, A., ekonomist; CHURIKOV, V.; BOGDANOVA, K.

Improve issuing credit to railroads. Den. i dred. 20 no.10:42-53 O '62. (MIRA 15:12)

1. Nachal'nik otdela kreditovaniya transporta i svyazi Leningradskoy gorodskoy kontory Gosbanda (for Reyer). 2. Saratovskaya oblastnaya kontora Gosbanka (for Agrikova, Polyakov).
(Railroads—Finance)

BOGDANOVA, K.G.; POLEVAYA, N.I.; SHCHIGLEV, N.D.

Absolute age of granitoids in the southwestern Altai. Inform.sbor. VSEGEI no.54:83-94 '62. (MIRA 17:1)

BOGDANOV, K.G.

Intrusive complexes in the southwestern Altai. Trudy VSEGEI 94:139-159 '63. (MIRA 17:6)

SUDZILOVSKIY, G.A., dotsent, kand.filolog.nauk, podpolkovnik zapasa;
BOGDANOVA, K.N.; BURYAKOV, Yu.F.; VORONIN, V.P.; SERGEYEV, O.N.;
TUROV, A.A.; BORISOV, V.V., red.; MARCHENKO, V.G., red.;
SAVIN, B.V., red.-leksikograf; YEFREMOVA, M.K., red.-leksikograf;
KUZ'MIN, I.F., tekhn.red.

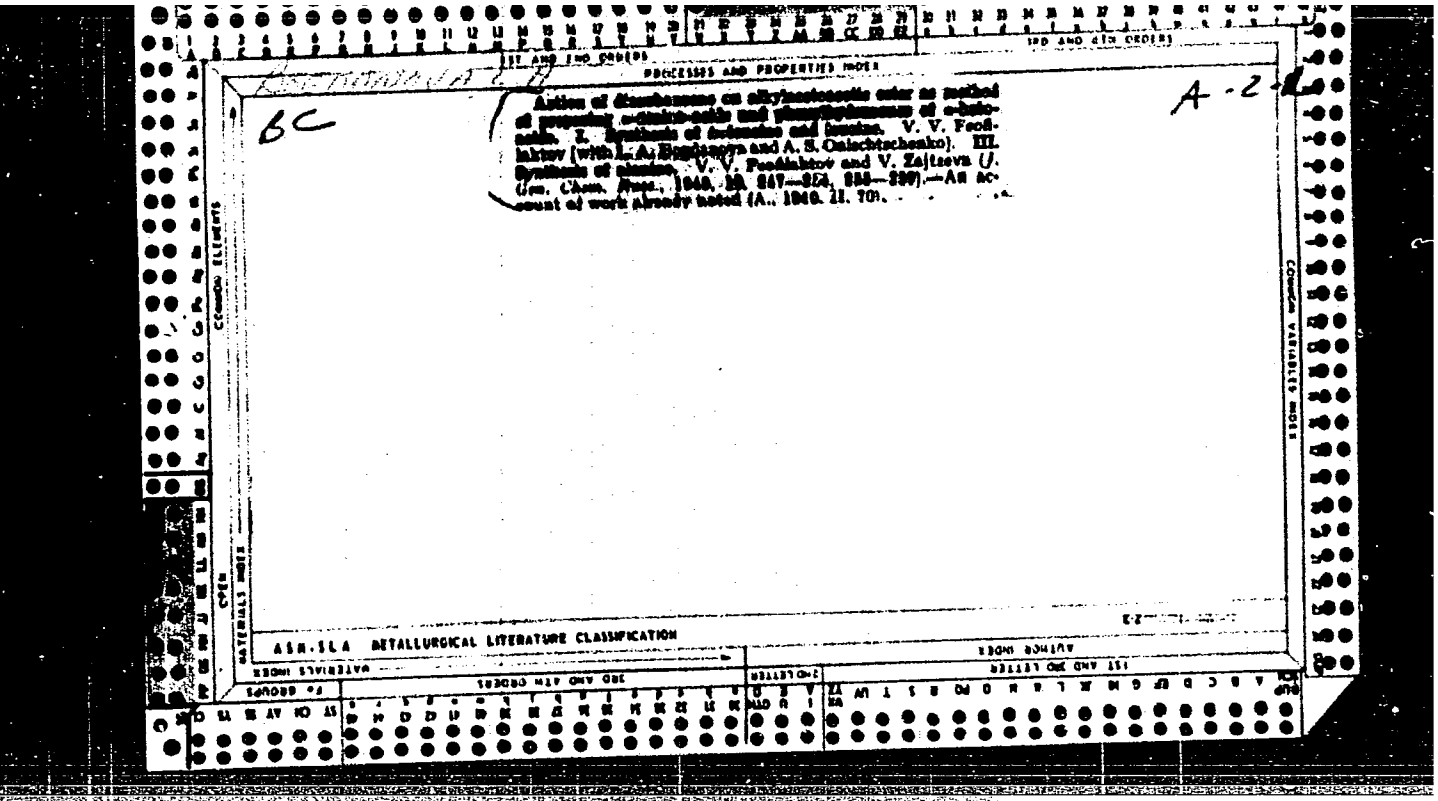
[English-Russian military dictionary] Anglo-russkii voennyi slovar'. Sost. Sudzilovskii, G.A., i dr. Pod obshchei red. Sudzilovskogo, G.A. Okolo 50000 terminov. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 965 p. (MIRA 13:10)
(English language--Dictionaries--Russian)
(Military art and science--Dictionaries)

BOGDANOVA, Lidiya Aleksandrovna; TEREKHINA, G.I., red.; TSVETKOVA, V.S., tekhn.red.

[Practical work in geography for the fifth grade; a manual for teachers] Prakticheskie raboty po geografii v 5 klasse; posobie dlia uchitelei. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 196 p. (MIRA 11:7)
(Geography--Study and teaching)

BOGDANOVA, Lidiya Aleksandrovna; VASIL'YEVA, O.S., red.; BORISKINA, V., red.kart; KREYS, I.G., tekhn.red.

[Method of teaching geography in the elementary school; teachers' manual] Metodika prepodavaniia geografii v nachal'noi shkole; posobie dlia uchitelei. Izd.2. Moskva, Gos.uchebno-pedagog. izd-vo M-va prosv.RSFSR, 1959. 208 p. (MIRA 12:11)
(Geography--Study and teaching)



Bogdanova, L. A.

USSR/Microbiology - General Microbiology F-1

Abs Jour : Ref Zhur - Biol., No 4, 1958, 14702

Author : Malkov, A.M., Bogdanova, L.A.
Inst : -
Title : Effect of Sodium Fluoride on Formation of Pyrophosphate Compounds by Yeasts During Fermentation.

Orig Pub : Mikrobiologiya, 1956, 24, No 4, 405-414

Abstract : Sodium fluoride added to a medium of glucose and mineral salts in concentrations 0.1-0.005 molar inhibits the process of alcoholic fermentation caused by bakers' yeast. In concentrations of 0.0001 molar, sodium fluoride does not delay the processes of fermentation and yeast multiplication. The toxic effect of NaF is diminished when added to fermenting yeasts. The synthesis of pyrophosphate compounds by yeasts which fermented on media containing different concentrations of NaF is not excluded. Exposure of yeasts before fermentation to concentrated

Card 1/2 Technol. Inst. Food Ind., Leningrad.

BOGDANOVA, L.A.

From the experience of working on the map of the "Central Region" for the Agricultural Atlas of the U.S.S.R. Geod.i kart. no.12:50-54 D '62. (MIRA 16:2)
(Agriculture--Maps)

UNKSOV, V.A.; BOROVIKOV, P.P.; RUNDKVIST, D.V.; PAVLOVA, I.G.; ALYAVDIN, V.F.; VOLOSTNYKH, G.T.; ROZINOV, M.I.; SHCHEGLOV, A.D.; IVANOVA, A.A.; KORMILITSYN, V.S.; SHCHEGLOV, A.D.; ARTEMOV, V.R.; RYTSK, Yu.Ye.; GINZBURG, A.I.; DORTMAN, N.B.; TOPORETS, S.A.; TRUNINA, V.Ya.; YAKOVLEV, I.K.; BOGDANOVA, L.A.; SARBEYEVA, L.M.

Problems of the geology and characteristics of the distribution of mineral deposits. [Trudy] VSEGEI 92:53-89 '63. (MIRA 17:4)

BOGDANOVA, L.A.; GAVRILOVA, O.I.; TOPORETS, S.A.

Changes taking place in hard coal under the effect of minor transgressive intrusions. Dokl. AN SSSR 159 no.3:564-567 N '64
(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (VSEGEI). Predstavleno akademikom N.M. Strakhovym.

BOGDANOVA, L.F., assistent

Results obtained with the Lazarevich-Gumilevsky straight obstetrical forceps. Akush. i gin. 33 no.1:33-35 Ja-F '57 (MLRA 10:4)

1. Iz kafedry akusherstva i ginekologii (zav.-prof. S.L. Keylin) Novosibirskogo meditsinskogo instituta.
(OBSTETRICS, appar. & instruments
straight forceps with sliding lock, trial) (Rus)

BOGDANOVA, Lyubov' Ivanovna; KUKHARKOVA, L.L., spetsred.; KUSAKOV, V.N., spetsred.; SEMENOVA, N.L., red.; CHEBYSHEVA, Ye.A., tekhn. red.

[Microbiological control in meat plants] Mikrobiologicheskii kontrol' na miasokombinatakh. Moskva, Pishchepromizdat, 1958. 137 p.
(Meat inspection) (MIRA 11:7)

BOGDANOVA, L.I., inzh.

Electromechanical load regulator for the threshing unit of SK-3 combines. Mekh. i elek. sots. sel'khoz. 19 no.3:39-41 '61 (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.
(Combines(Agricultural Machinery))

BOGDANOVA, L.I., inzh.

Graphic determination of the efficiency of speed control in the SK-3 combine. Mekh. i elek. sots. sel'khoz. 19 no.6:50-51 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skog khozyaystva.
(Combines (Agricultural machinery))

L 56530-65
ACCESSION NR: AP5018581 UR/0242/64/000/010/0066/0067

AUTHOR: Karpova, V. L.; Bogdanova, L. I. 9 8

TITLE: Aerosol treatment of bronchial asthma with bronocholytic drugs

SOURCE: Meditsinskiy zhurnal Uzbekistana, no. 10, 1964, 66-67

TOPIC TAGS: aerosol, respiratory system disease, respiratory drug, experiment animal, drug treatment, antibiotic

Abstract: The article describes aerosol treatment of bronchial asthma with bronchodilators in combination with desensitizing drugs of the following composition: 2 ml of 24% theophylline, 1 ml of 2% papaverine hydrochloride, 1 ml of 3% ephedrine hydrochloride, 1 ml of 5% ascorbic acid and 1 ml of 1% dimedrol. When chronic lung diseases were present antibiotic aerosols of penicillin and streptomycin dissolved in 5 ml of a 0.5% novocaine solution were added to the treatment. A V-200 portable aerosol apparatus was used, and patients inhaled once a day -- or twice special case with an interval of 10-15 minutes. Treatment was stopped when the patient's asthma attacks ceased. The treatment was given to 13 men and 14 women between 26 and 60 years of age; 13 had suffered with bronchial asthma for 1-5 years; the others had had it over 5 years. Asthma attacks ceased in all patients: in 13 after

Card 1/2

L 56530-65
ACCESSION NR: AP5018581

5 treatments, in 10 after 7, and in 4 after 10 treatments. As a rule the treatment diminished wheezing, normalized body temperature, reduced the number of leukocytes and eosinophils in the urine, and increased lung capacity to 2,200-2,800.

ASSOCIATION: none

SUBMITTED: 04Jul63 ENCL: 00 SUB CODE: LS, GC

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2

STEPANOV, V.M.; BOGDANOVA, L.I.

Hydrogeological conditions in the Ingoda-Sylyva interfluve of central Transbaikalia. Mat. Kom. po izuch. podzem. vod. Sib. i Dal' Vost. no.2:186-194 '62. (MIRA 17:8)

POKROVSKIY, A.A.; BOGDANOVA, I.M.

Characteristics of the secretion of proteolytic enzymes of gastric juice in various diseases. Vop. med. khim. 9 no.2: 217-218 Mr-Ap '63. (MIRA 17:8)

1. Institut pitaniya AMN SSSR, Moskva.

KARAPETOV, A.M.; BOGDANOVA, L.M.; NOSENKOV, I.E.

Programming the commercial prospecting in the Ust'-Balyk oil field. Neftegaz. geol. i geofiz. no.3:17-20 '64.
(MIRA 17:5)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

DEVDARIANI, A.S.; BOGDANOVA, L.P.; VORONKEVICH, S.D.

Method of studying the erodibility of cohesive rocks in a laundar. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 14 no.2:165-170 '59. (MIRA 13:4)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo gos. universiteta.
(Rocks--Testing)

RYSS, I.F.; BOGDANOVA, L.P.

Kinetics of alkaline hydrolysis of triethylaminosulfotrioxide. Zhur. neorg. khim. 10 no.1:172-175 Ja '65. (MIRA 18:11)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta. Submitted July 18, 1963.

KARAPETOV, A.M.; BOGDANOVA, L.M.; ROSLENKOV, I.E.

Concerning the geochemical anomaly in the territory of the Shaim oil and gaz zone in Western Siberia. Nauch.-tekh. sbor. po dob. nefti no.25:17-23 '64. (MIRA 17:12)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

1- 4E31

The properties of dihydroxyfluoroboric acid

and L. P. Bogdanova

BF$_4$ by boiling with a soln. of CaCl$_2$. It was established that I does not contain a significant quantity of BF$_4$. The reaction of I with NaHF$_2$ and KHF$_2$ leads to the formation of the tetrafluoroborates. I reacts with Na$_2$B$_4$O$_5$F$_2$ to form NaBF$_4$ and H$_3$BO$_3$. I reacts with NaCl or Na$_2$CO$_3$ to form Na$_2$B$_2$O$_3$F$_2$ and with NaF to form the same salt plus NaBF$_4$. The chem. properties of I support the assumption that it corresponds to the formula HO-BF$_2$.

BOGDANOVA, L. P. Cand Chem Sci -- (diss) "Study in the field of the vapor-phase hydration of acetylene and its derivatives." Len, 1958. 9 pp (Min of Higher Education USSR. Len Order of Labor Red Banner Technological Inst im Lensovet), 150 copies (KL, 36-58, 110)

AUTHORS: Ryss, I.G., Bogdanova, L.P. SOV/ 78-3-7-36/44

TITLE: The Solubility Polytherm of $Na_3B_3O_3F_6$. Equilibrium of the System $Na_3B_3O_3F_6$-NaJ-H_2O at 25° (Politerma rastvorimosti $Na_3B_3O_3F_6$. Ravnovesiye sistemy $Na_3B_3O_3F_6$-NaJ-H_2O pri 25°)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1669-1674 (USSR)

ABSTRACT: The velocity of the formation of BF_4^- in solutions of $Na_3B_3O_3F_6$ at 70-90° C was determined. At 30° C the forming of BF_4^- from solutions of $Na_3B_3O_3F_6$ develops comparatively slowly, and therefore it is possible to determine the solubility of $Na_3B_3O_3F_6$. The velocity of the formation of NF_4^- increases with rising temperature and decreases with an increase of the concentration of $Na_3B_3O_3F_6$. The heat of solution in water is -7.5 kcal/mol. The equilibrium in the system $Na_3B_3O_3F_6$-NaJ-H_2O at 25° was investigated. The results obtained confirm the chemical formula of these compounds. At a higher concentration of $B_3O_3F_6^{3-}$ in the solution and in the domain of a lower concentration of Na^+ no considerable depolimerization of $B_3O_3F_6^{3-}$ occurs. There are

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The Solubility Polytherm of $Na_3B_3O_3F_6$. SOV/78-3-7-36/44
Equilibrium of the System $Na_3B_3O_3F_6$-NaI-H_2O at 25°

4 figures, 2 tables, and 9 references, 7 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railroad Transport Engineers)

SUBMITTED: May 28, 1957

1. Complex compounds--Solubility 2. Chemical equilibrium --Determination 3. Complex compounds--Chemical analysis

Card 2/2

AUTHORS: Gorin, Yu. A., Bogdanova, L. P. 79-28 3-20/61

TITLE: Investigation Within the Field of Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase State (Issledovaniye v oblasti parofaznoy kataliticheskoy gidratatsii atsetilena i yego proizvodnykh).
I. Hydration of Vinylacetylene to Methylvinylketone (I. Gidratatsiya vinilatsetilena v metilvinilketon)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 657-661 (USSR)

ABSTRACT: The present work shows that the hydration process of vinylacetylene into methylvinylketone in the vapor phase can be successfully carried out with zinc oxide, cadmium-tungstenate, the cadmium-calciumphosphate catalyst and tungsten oxide. The process takes place with a solution in a tenfold volume of steam. The formed methylvinylketone in the reaction products is partly contained in aqueous solutions and partly in the upper oil layer from which it can be separated by rectification. Besides this, ketone polymerization products of vinylacetylene as well as the

Card 1/3

Investigation Within the Field of Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase State. I. Hydration of Vinylacetylene to Methylvinylketone

79-28-3-20/61

2-acetyl-6-methyl-2,3-dihydropyran are obtained. The results of the temperature influence and of the spatial velocity of vinylacetylene on its hydration process in the presence of various catalysts are mentioned in a table. From the data of the table it can be concluded that cadmium tungstenate has the greatest activity and selectivity with respect to the yield in methylvinylketone. The maximum yields in methylvinylketone which had been obtained by the most effective conditions above the mentioned catalysts are not less than those of the hydration of vinylacetylene in the liquid phase by means of mercury catalysts, as mentioned in publications. The investigation on the lengthiness of a contact reaction cycle showed that after 3 operation hours the activity of the catalysts drops in consequence of the deposition of polymers and resins on their surfaces. The contact action of the catalysts can be regenerated in the flow of a mixture of air and steam at from 400-450°C. There are 1 table and 17 references, 8 of which are Soviet.

Card 2/3

Investigation Within the Field of Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase State. I. Hydration of Vinylacetylene to Methylvinylketone

79-28-3-20/61

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: March 27, 1957

Card 3/3

AUTHORS: Gorin, Yu. A., Bogdanova, L. P. 79-28-5-4/69

TITLE: Investigation in the Field of the Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase (Issledovaniye v oblasti parofaznoy kataliticheskoy gidratatsii atsetilena i yego proizvodnykh). II. Hydration of Phenylacetylene of Tertiary Butylacetylene of Dimethylacetylene, of Methylethylacetylene and of Ethylvinylacetylene (II. Gidratatsiya fenilatsetilena, tret-butil-atsetilena, dimetilatsetilena, metiletilatsetilena i etilvinilatsetilena)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5, pp. 1144-1150 (USSR)

ABSTRACT: In the previous paper (Reference 6) results were described which had been obtained in the hydration of vinylacetylene on solid catalysts which contained no mercury compounds. In this paper the authors tried to hydrate other mono- and disubstituted derivatives of acetylene on the cadmium-calciumphosphate catalyst. It was shown that this way ketones of different structure can be obtained from acetylene derivatives. Hydration in the vapor phase takes

Card 1/3

Investigation in the Field of the Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase.II. Hydration of Phenylacetylene of Tertiary Butylacetylene of Dimethylacetylene, of Methylethylacetylene and of Ethylvinylacetylene

79-28-5-4/69

especially effectful a course for the monosubstituted acetylene derivatives, this is less the case with disubstituted ones; these latter do apparently not react as quickly, and only with small yields of the hydration products consisting of ketones; this is probably because of their structure. Thus the hydration conversions of some mono- and disubstituted homologs of acetylene on cadmium--calciumphosphate catalysts in the vapor phase were investigated. In comparing the depth of conversion of mono- and disubstituted acetylene homologs in the hydration process in the vapor phase on a catalyst it was found that on the same conditions their activity depends on the nature of the radical at the triple-bond. Disubstituted acetylene derivatives do not hydrate as quickly as the monosubstituted ones on these conditions. Schemes were proposed which demonstrate the course of hydration of acetylene and of its derivatives in the vapor phase on solid catalysts.

Card 2/3 There is 1 table and 19 references, 13 of which are Soviet.

79-28-5-4/69

Investigation in the Field of the Catalytic Hydration of Acetylene and its Derivatives in the Vapor Phase. II. Hydration of Tertiary Butylacetylene of Dimethylacetylene, of Methylethylacetylene and of Ethylvinylacetylene

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: April 24, 1957

Card 3/3

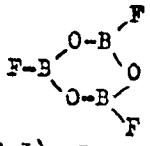
5(2)

AUTHORS: Ryss, I. G., Bogdanova, L. P. SOV/78-4-8-22/43

TITLE: Potassium-hexafluoroboroxolate $K_3[B_3O_3F_6]$ and Potassium Hydroxo-pentafluoroboron-oxolate $K_3[B_3O_3F_5OH]$ (Geksaftorobor-oksolat kaliya $K_3[B_3O_3F_6]$ i gidroksopentaftorobor-oksolat kaliya $K_3[B_3O_3F_5OH]$)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1839-1843 (USSR)

ABSTRACT: Boron fluoride complexes were synthesized for the first time by the author mentioned first (Refs 1,2). They are ascribed a cyclic structure. They may be regarded as addition products of F- and OH-ions to trifluoroboroxol



which is unstable in free state (Ref 3). Besides the hydroxo-tetrafluoroboroxolic salt of potassium $K_2[B_3O_3F_4OH]$ which was

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Potassium-hexafluoroboroxolate $K_3[B_3O_3F_6]$ and Potassium Hydroxopentafluoroboron-oxolate $K_3[B_3O_3F_5OH]$ SOV/78-4-8-22/43

produced already earlier the compounds mentioned in the title were obtained and the denotation mentioned in the title was suggested because of the genetic connection with boroxol $H_3B_3O_3$ and trifluoroboroxol. $K_2[B_3O_3F_4OH]$ is transformed into $K_3[B_3O_3F_5OH]$ in weakly alkali 10% KF-solution. In the absence of alkali a partial substitution of the hydroxyl by fluorine takes place. In the case of an excess of KHF_2 in concentrated potassium fluoride solution the hydroxotetrafluoride compound reacts under the formation of $K_3[B_3O_3F_6]$ It is stable at room temperature in a potassium fluoride concentration of more than 35%. The hexafluoride compound and the hydroxopentafluoride compound are decomposed under the action of water or diluted KF-solutions and $K_2[B_3O_3F_4OH]$ is precipitated. The synthesized substances are new derivatives of trifluoroboroxol. There are 2 tables and 9 references, 8 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railway Transport Engineers)

Card 2/3

AUTHORS: Gorin, Yu. A., Bogdanova, L. P. SOV/79-29-2-4/71

TITLE: Investigation of the Vapor-phase Hydration of Acetylene and Its Derivatives (Issledovaniye v oblasti parofaznoy gidratatsii atsetilena i yego proizvodnykh). IV. Affiliation of Ethyl and Butyl Alcohol to Vinyl Acetylene Under the Influence of Solid Catalysts (IV. Prisoyedineniye etilovogo i butilovogo spirtov k vinilatsetilenu pod vliyaniyem tverdykh katalizatorov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 365-366 (USSR)

ABSTRACT: The reaction of vinyl acetylene with alcohols is of great interest, as it leads to the formation of various products, depending on the catalyst and the reaction conditions chosen (Refs 1-5). Gorin showed (Ref 6) that by using zinc oxide as a catalyst at 325° in the vapor phase, ethyl and butyl alcohol affiliate to acetylene, forming vinyl ethyl and vinyl butyl ether. On comparing the affiliation of these alcohols to acetylene by a solid catalyst with the same affiliation of water under equal conditions, the authors assume the first product forming from the affiliation of water to acetylene to be vinyl alcohol (in analogy with vinyl ether), which in its turn isomerizes to acetic aldehyde. An attempt is made in the present

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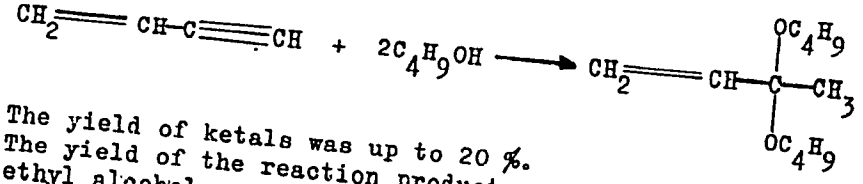
Investigation of the Vapor-phase Hydration of Acetylene and Its Derivatives. IV. Affiliation of Ethyl and Butyl Alcohol to Vinyl Acetylene Under the Influence of Solid Catalysts

SOV/79-29-2-4/71

paper (in analogy with the affiliation of water to vinyl acetylene) to affiliate alcohols to vinyl acetylene under the influence of solid catalysts, zinc oxide being employed in the first place. On attempting the reaction of vinyl acetylene with ethyl and butyl alcohol, two molecules of butyl alcohol were found to affiliate to the hydrocarbon at the acetylene bond, under formation of a ketal:



The yield of ketals was up to 20 %.
The yield of the reaction products of vinyl acetylene with ethyl alcohol was low, only up to 20 %, most probably because

Card 2/3

Investigation of the Vapor-phase Hydration of Acetylene and Its Derivatives. IV. Affiliation of Ethyl and Butyl Alcohol to Vinyl Acetylene Under the Influence of Solid Catalysts SOV/79-29-2-4/71

of their low stability under the reaction conditions. There are 8 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: December 16, 1957

Card 3/3

BOGDANOVA, L. P., Cand Chem Sci (diss) "Investigation of the properties of polynuclear boron fluorine-complexes," Dnepropetrovsk, 1960, 15 pp (Dnepropetrovsk Chemical Technological Institute imeni F. E. Dzerzhinskiy) (KL, 40-60, 120)

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5.2400(B)

S/078/60/005/05/08/037
B004/B016

AUTHORS: Ryss, I. G., Bogdanova, L. P.

TITLE: Ammonium Salts of Fluoboric Acids

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 5, pp. 1028-1035

TEXT: The authors describe the synthesis of $(NH_4)_2[B_3O_3F_4OH]$ (I) and NH_4BF_3OH (II). Salt (I) was obtained by triturating anhydrous ammonium bifluoride with boric acid: $2NH_4HF_2 + 3H_3BO_3 = (NH_4)_2[B_3O_3F_4OH] + 5H_2O$. Analyses of the products of syntheses repeatedly carried out under different conditions (triturating of the anhydrous initial products, synthesis in water-alcohol mixtures at 0° or -7°, addition of small quantities of HF) are represented in table 1. Complete elimination of impurities (H_2O, NH_4F) was not possible. The solubility of salt (I) was investigated by the isothermal method. Table 2 gives the results. Fig. 1 shows the solubility at

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Ammonium Salts of Fluoboric Acids

S/078/60/005/05/08/037
B004/B016

25° in the presence of NH_4F (Abstracter's Note: This figure is missing). Reactions between (I) and NH_4F were found to occur. The reaction products could not be isolated owing to their considerable (and obviously incongruent) solubility. The results of thermal decomposition of (I) are listed in table 3. H_2O and NH_3 are split off. After heating for two hours up to 150° 38% of (I) was decomposed under the formation of NH_4BF_4, the remaining 62% had lost its water. At 200° and 250° the weight loss continued with NH_3 and a boron fluoride compound being released. Compound (II) was prepared according to the equation: $(NH_4)_2[B_3O_3F_4OH] + 4NH_4HF_2 = 3NH_4[BF_3OH] + + 3NH_4F + H_2O$. Analyses of the reaction products are represented in table 4. Owing to the very high solubility of (II) in water, complete elimination of the NH_4F impurity was not possible. The authors further attempted to prepare the compound $B_2O_3.NH_4F.HF$ which was described by G. I. Petrenko (Ref. 3). However, they obtained only a mixture consisting of (I), boric acid, and presumably ammonium borates (Table 5). Nor was it possible to prepare the compound $(NH_4)_2[O(BF_3)_4]$, described by Svaynkhert, and patented

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Ammonium Salts of Fluoboric Acids

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B004/B016

for him. The syntheses performed according to the patent yielded an inhomogeneous mixture mainly consisting of NH_4BF_4 (Table 6). There are 4
6 tables and 13 Soviet references.

ASSOCIATION: Dnepropetrovskiy institut zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railroad Transportation)

SUBMITTED: February 7, 1959

Card 3/3

29162 R
S/073/60/026/004/001/008
B103/B220

5.2420

AUTHORS: Ryss, I. G. and Bogdanova, L. P.

TITLE: Hydroxy tetrafluoro-boroxolates of rubidium and cesium

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 25, no. 4, 1960, 403-408

TEXT: Synthesis, properties, and analysis of rubidium and cesium hydroxy tetrafluoro-boroxolates are described. The Ru and Cs content of the compounds was determined gravimetrically as tetrafluoroborate. The complex anion was determined by double titration: 1) titration in the presence of methyl orange and excess of 1 mole of $CaCl_2$ to boric acid and CaF_2; 2) titration of the boric acid (after addition to mannite and phenolphthalein). The consumption of alkali in titrations 1) and 2) is indicated by n_1 and n_2. The portions were weighed by the microbalance BM-20 (VM-20).

A) Synthesis of $Rb_2[B_3O_3F_4OH]$. $RbNO_3$ is dissolved in a saturated solution of $(NH_4)_2[B_3O_3F_4OH]$. The precipitate is not yet a pure final product. By slight amounts of HF before the addition of $RbNO_3$, the purity could be

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Hydroxy tetrafluoro-boroxolates of ...

improved (optimum molar ratio HF / $(NH_4)_2[B_3O_3F_4OH]$ = 2.04). The crystals of $Rb_2[B_3O_3F_4OH]$ are similar to those of the potassium salt. They may belong to the planar type of the rhombic syngony. Their solubility in water amounts to 16% at 17°C. B) Synthesis of $Cs_2[B_3O_3F_4OH]$. Boric acid and $CsHF_2$ are dissolved completely at 30°C in the ratio $2CsHF_2 + 3H_3BO_3 \longrightarrow Cs_2[B_3O_3F_4OH] + 5H_2O$. When this solution is cooled, crystallization does not occur. Only after the addition of 3.5 times as much alcohol two layers are forming, the lower of which crystallizes slowly. Also in this case, F is substituted partly by OH. An addition of 0.10 mole of HF improves the composition of the final product slightly. A crystal hydrate is formed which gives off its water only after 4 hr at 110°C and reaches the theoretical composition approximately. The water solubility of the water-free cesium salt amounts to 77.7% at 18°C. The equilibrium constants of the substitution of F by OH in dissolved boron complexes are calculated by the authors for the first and second stage of the hydrolysis: $K_1 \simeq 2.2 \cdot 10^8$ and $K_2 \simeq 2 \cdot 10^7$. From the total equilibrium

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Hydroxy tetrafluoro-boroxolates of ...

constant of hydrolysis, from the solubility and the dissociation constant of boric acid the equilibrium constant of the process was calculated $BF_4^- - 4OH^- \rightleftarrows B(OH)_4^- + 4F^- : K_3 \simeq 6 \cdot 10^{26}$. Based on the comparison of the values K_1, K_2, and K_3 the authors conclude that the equilibrium constant of the substitution of the fluorine atom by OH decreases in every stage of substitution. A substitution of OH by F is possible for low pH values only. An increasing number of F atoms in the complex reduces the pH value required for the substitution. The different stability of the triple-charged trimer fluoro-hydroxy complexes is explained by the authors as follows: in solutions, equilibrium may exist between the cyclic and the linear form of the trimer anions as well as between the trimer form and its depolarization products. The addition of any further OH or F anion entails an increase of the repulsive powers between the anions having charges of equal sign, the stability of the cyclic forms decreases. The following general conditions are mentioned for the stability of fluoro and hydroxy complexes in solutions: for low values of pH and excess of fluorine, the prevailing form is BF_4^-. When the pH is increased and the

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Hydroxy tetrafluoro-boroxolates of ...

ratio F/B reduced, first of all BF_3OH^- forms and then $B_3O_3F_6^{3-}$, $B_3O_3F_5OH^{3-}$, and $B_3O_3F_4OH^{2-}$ being in the solution probably in equilibrium with the linear forms which have been formed by addition of water molecules. In case of a further slight increase of the pH, polymer boron hydroxy complexes are formed and finally $B(OH)_4^-$. Since all these boron complexes (except BF_4^-) form very quickly, they are heavy and can be separated only in a relatively narrow range of pH values and of volumetric proportion of the reagents. For the coordination of any donor by a boron atom, the plane sp^2 bonds are replaced by tetrahedral sp^3 bonds. Therefore, the plane $B_3O_3F_3$ ring will curve when liganda are added. Thus, the accommodation of large cations may be rendered difficult. Therefore, the complexes of type $M_3[B_3O_3F_6]$ are separated most easily when M = Na, whereas this is more difficult for M = K, and impossible for M = NH_4. It may be possible that the above-mentioned crystal hydrate of the cesium complex actually does not contain cyclic but linear anions and has an empirical

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formula $Cs_2[B_3O_2F_4(OH)_3]$. Its difficult dehydration as well as the large differences in crystal form and water solubility between the cesium salt on the one hand, and the potassium and rubidium salts on the other, would speak in favor of this explanation. K. B. Yatsimirskiy and K.P. Mishchenko are mentioned. There are 2 tables and 21 references: 13 Soviet-bloc and 8 non-Soviet-bloc. The two references to English-language publications read as follows: J. O. Edwards (Ref. 16: J. Amer. Chem. Soc., 75, 6151 (1957)), J. O. Edwards, G. C. Morrison, V. F. Ross, J. W. Schultz (Ref. 21: ibid. 77, 266 (1955)).

ASSOCIATION: Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railroad Engineers)

SUBMITTED: May 29, 1959

S/032/60/026/004/009/009
B015/B054

5 2200 E

AUTHORS: Ryss, I. G., and Bogdanova, L. P.

TITLE: Hydroxo-tetrafluoro Boron Oxalates of Rubidium and of Cesium

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 4, pp. 405-408

/A

TEXT: In the present paper, the authors describe the production and some properties of the hydroxy-tetrafluoro boron oxalates of rubidium and cesium. First, they describe their method of analysis. The synthesis was made in small amounts (0.6 - 0.9 g). The samples for analysis were weighed on a microbalance of the type VM-20 (VM-20). By means of the exchange reaction of a saturated solution of $(NH_4)_2\left[B_2O_2F_4OH\right]$ and $RbNO_3$ in the presence of small HF amounts, the authors obtained the salt $Rb_2\left[B_2O_2F_4OH\right]$. With respect to its crystal form, this salt is very similar to the corresponding potassium salt. Its solubility in water is 16.7% at

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Hydroxo-tetrafluoro Boron Oxalates of Rubidium and of Cesium

S/073/60/026/004/001/009
B016/B054

[illegible]°C $RbNO_3$ first dissolves in $(NH_4)_2[B_3O_3F_4OH]$. Then a precipitate is formed which does not yet yield sufficiently pure $Rb_2[B_3O_3F_4OH]$ after washing with alcohol and ether, and drying at [illegible]0°C (Table 1, Experiment [illegible]). The authors examined the possibility of suppressing the tendency towards partial substitution of fluorine by hydroxyl. A small HF amount was introduced for this purpose before adding the nitrate. When the HF excess is too high, the yield in $Rb_2[B_3O_3F_4OH]$ is reduced due to the formation of more soluble complexes. Cesium-hydroxy-tetrafluoro boron oxalate: By mixing boric acid with a 59% cesium bifluoride solution in quantities corresponding to the equation indicated, full dissolution occurs at 30°C. The solution does not crystallize in cooling. By adding the [illegible]-fold alcohol volume, the solution is separated into two layers, the lower one crystallizing slowly. The crystals were treated as in the previous compound. The analysis shows a partial substitution of fluorine by the hydroxyl (Table 2). Also here, an HF addition suppresses this tendency. The salt obtained forms a crystal hydrate which is dehydrated with [illegible] [illegible]. Subsequently the authors discuss the influence of the [illegible]

Card 2/3

Hydroxo-tetrafluoro Boron Oxalates of Rubidium and of Cesium

S/073/60/026/004/001/005
B016/B054

constants on the substitution of OH by F. They mention papers by K. B. Yatsimirskiy (Ref. 8) and K. P. Mishchenko (Ref. 9), as well as Ye. M. Shwarts (Ref. 20). Finally, they deal with the conditions for the formation of hydroxyfluoro oxalates and fluoro boron oxalates (dependence on the pH, diameter of the cation). There are 2 tables and 21 references: 11 Soviet, 5 US, 2 French, 2 Finland, and 1 Sweden.

ASSOCIATION: Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta (Dnepropetrovsk Institute of Railroad Engineers)

SUBMITTED: May 29, 1959

Card 3/3

RYSS, I.G.; BOGDANOVA, L.P.

Kinetics of trimethylamino sulfotrioxide hydrolysis. Zhur.neorg.-khim. 7 no.6:1316-1319 Je '62. (MIRA 15:6)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta, kafedra khimii.

(Sulfoxide) (Triethylamine)

RYSS, I.G.; BOGDANOVA, L.P.

Kinetics of triethylaminosulfotrioxide hydrolysis. Zhur.neorg.khim. 8 no.1:24-27 Ja '63. (MIRA 16:5)

1. Dnepropetrovskiy transportnyy institut.
(Sulfoxide) (Hydrolysis)

L 12606-65 EWT(1)/EPA(s)-2/EWT(m)/EWP(t)/EWP(b) Pt-10 IJP(c) JD/JG/GG

ACCESSION NR: AP4044942 S/0181/64/006/009/2703/2707

AUTHORS: Manuylova, A. A.; Bogdanova, L. P.

TITLE: Ferromagnetic resonance in unsaturated single crystals of yttrium garnet

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2703-2707

TOPIC TAGS: ferromagnetic resonance, yttrium iron garnet, single crystal, domain structure, magnetic saturation

ABSTRACT: Unlike earlier investigations, where the frequency of the alternating magnetic field was maintained constant and the temperature varied, in the present study the temperature was maintained constant and ferromagnetic resonance in a spherical single-crystal sample of yttrium garnet, with conserved domain structure, was investigated experimentally at different frequencies. [illegible] was 77K. The measurement procedure was described by A. G. Gurevich

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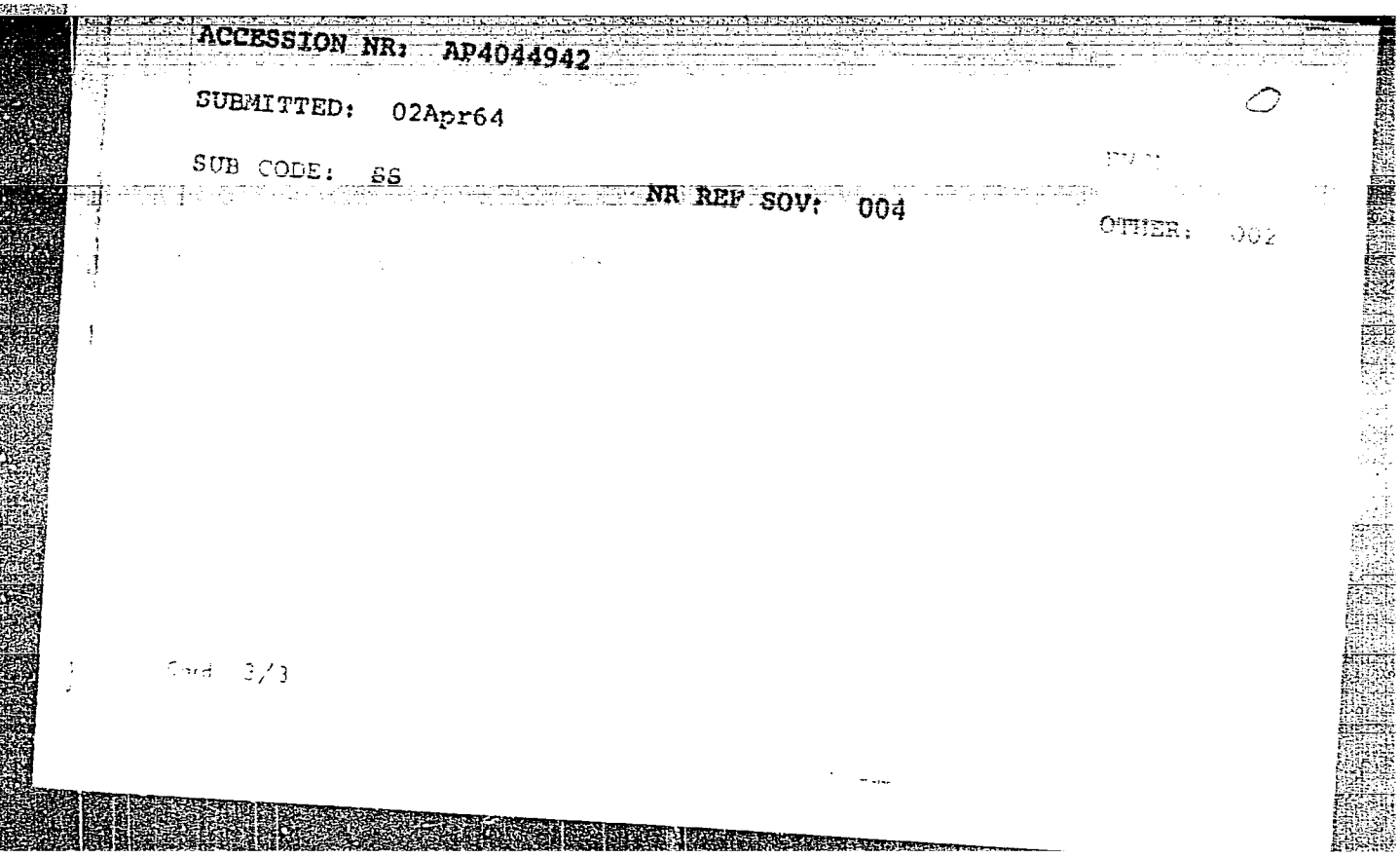
L 12616-65

ACCESSION NR: AP4044942

et al. (Zav. lab. no. 2, 189, 1962). Results show the following: 1. The effect of the domain structure of ferromagnetic resonance in single crystal $Y_3Fe_5O_2$ at constant temperature is described accurately by the resonance relations of J. [illegible] Artman (Phys. Rev. v. 105, 62, 1957). 2. The range of frequencies in which observation of the domain resonance is possible is somewhat broader than that obtained by Artman. 3. The character of the absorption curve in domain resonance suggests that the magnetization of such a sample is due not only to the decrease in the angle between the magnetic moment and the field, as assumed by Artman, but also to displacement of the wall boundaries for a field H [illegible] of the resonance curve in the case of domain resonance [illegible] same as for a sample magnetized to saturation. [illegible] thank A. S. Borovik for interest in the work and for discussion of the results." Orig. art. has: 3 figures and [illegible] formulas.

ASSOCIATION: None

Card 2/3



ACCESSION NR: AP4044942

SUBMITTED: 02Apr64

SUB CODE: GS

NR REF SOV: 004

OTHER: 002

Card 3/3

MANUYLOVA, A.A.; BOGDANOVA, L.P.

Ferromagnetic resonance in unsaturated single crystals of yttrium garnet. Fiz. tver. tela 6 no.9:2703-2707 S '64.
(MIRA 17:11)

SLORODIN, Ya.M.; BARANOVICH, Z.N.; BOGDANOVA, L.P.

Determining the solubility of gases in liquids. Zav. lab. 30 no.8:972 '64. (MIRA 18:3)

1. Severo-zapadnyy zaochnyy politekhnicheskiy institut.

ACC NR: AP6013515

UR/0120/66/000/002/0134/0137

AUTHOR: Bezverkhniy, Sh.A.; Bogdanova, L.P.; Bramson, M.A.

ORG: None

TITLE: Standard source of "negative" infrared radiation

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 134-137

TOPIC TAGS: infrared equipment, infrared radiation standard, black body radiation, IR radiation, IR source

ABSTRACT: This paper describes a standard absolutely black body source of infrared radiation. Its total emissivity, ε, is between .99 and 1.00 and its temperature can be controlled between - 20 and + 40°C by thermoelectric means. Thus it can either emit or absorb radiation and can be considered to be a "negative" radiation source. The instrument is stable and has low overall dimensions. The approach of emissivity to unity was effected by efficient cavity design, in form of a hollow cone frustrum with a small rectangular opening at the smaller top base, and a serrated inside bottom floor. A four-thermistor circuit senses the base temperature. The thermoelectric battery works either as a heater or a cooler, uses 24 watts. At present the temperature is adjusted manually with a precision of .5°C; further development is planned, to add precise temperature regulation. Original art. has 3 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 03Mar65 / ORIG. REF: 002 / OTH REF: 001

UDC: 621.317.794

Card 1/1

Bogdanova, L.S.

VOLOKHOV, M.I., kandidat tekhnicheskikh nauk; MISYUNAS, L.K.; BOGDANOVA, L.S.

Measuring dust in the air with an electronic onimeter. Bor'ba s sil. 2:235-242 '55. (MLRA 9:5)

1. Institut gornogo dela Akademii nauk Kazakhskoy SSR.
(DUST)

Bogdanova, L.S.

BUSHTYAN, N.P.; MORDKOVICH, M.S.; BOGDANOVA, L.S.

Organizing stations for primary processing of tomatoes in supply areas of the canneries of the Moldavian S. S. R. Kons. i ov. prom. 12 no.1:22-27 Ja '57. (MLRA 10:5)

1. Tiraspol'skiy zavod imeni 1 Maya (for Bushtyan). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti. (for Mordkovich and Bogdanova).
(Moldavia--Tomatoes)

BOGDANOVA, L.S.

Increasing labor productivity and lowering labor expenditure in commercial processing of apples in fruit packing factories. Kons. i ov. prom. 12 no.2:36-39 F '57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti.
(Apples) (Labor productivity)

BOGDANOVA, L.S.

Economic problems in the storage of fruit. Kons. i ov. prom. 13 no.1:26-28 Ja '58. (MIRA 11:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti.
(Fruit--Storage)

BOGDANOVA, L.S.

Conference on the problems of coordinating scientific research.
Kons. i ov. prom. 13 no.1:46-47 Ja '58. (MIRA 11:2)
(Food research--Congresses)